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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,806	04/09/2004	Chung-Shih Tang	UOH.001A	9054

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EXAMINER

HOLMAN, JOHN D

ART UNIT	PAPER NUMBER
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3643

NOTIFICATION DATE	DELIVERY MODE
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07/26/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/821,806

Applicant(s)

TANG ET AL.

Examiner

John D. Holman

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26, 29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26, 29, and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the metal ion" in line 21. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6, 10-14, 24-26, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsu (4382348) in view of Hogen (US 4536988).

Regarding claim 1, Kitsu discloses a plant cultivation system comprising a plant support (3) comprising a buoyant portion (5, 6), and at least one terrestrial plant (22) in contact with the plant support (3) wherein the at least a portion of the plant contacts saline water (1). See figure 1B and 4. Kitsu discloses the system as a pond device,

and according to the application specification saline water is disclosed as possibly being pond water. Applicant's specification indicates that the invention applies to water having various levels of salinity, see paragraph 2 for example. Also, in paragraph 6 applicant separates brackish water from pond water thereby providing evidence that pond water, although not brackish, is still considered saline. Furthermore, all water has some level of salt and therefore all water can be considered to be saline at some level. Therefore, because of the definition of pond water disclosed in the application specification, pond water is assumed to be saline water. The claim differs from Kitsu in calling for the buoyant portion to be flexible. Hogen discloses a plant cultivation system wherein the buoyant portion (24) is flexible. See Hogen figure 1, column 2, lines 11-16, and column 4, lines 38-48. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kitsu in view of the teachings of Hogen to include the buoyant portion to be flexible for the purpose of contouring to stream flow in order to prevent the plants from being blown over (column 4, lines 38-48).

Regarding claim 2, Kitsu as modified in claim 1 discloses a plant system wherein the water (1) comprises pond water. See column 4, lines 25-27.

Regarding claim 3, Kitsu as modified in claim 1 discloses a plant system wherein the water (1) is located in a pond. See column 4, lines 25-27.

Regarding claim 6, Kitsu as modified in claim 1 discloses a plant system wherein the plant support (3) comprises a sheet material (4) in contact with a buoyant frame (5, 6). See figure 3.

Regarding claim 10, Kitsu as modified in claim 6 discloses a plant system wherein the sheet (4) is capable of being suspended at or near a surface of a body of saline water (1) and at least one buoyant support (5, 6) member is in contact with the sheet (4). See figure 3.

Regarding claim 11, Kitsu as modified in claim 10 discloses a plant system wherein the at least one buoyant support member (5, 6) forms a supporting structure for the platform. See figure 3 and 4.

Regarding claim 12, Kitsu as modified in claim 10 discloses a plant system wherein the buoyant support member (5, 6) comprises synthetic resin. See figure 3 and column 3, lines 54-56.

Regarding claim 13, Kitsu as modified in claim 10 discloses a plant system wherein the sheet (4) comprises plastic material. See figure 3 and column 3, lines 52-54.

Regarding claim 14, Kitsu as modified in claim 10 discloses a plant system wherein a space for growth of a terrestrial plant (22) is present in a region between two buoyant support members (5, 6). See figure 3 and 4.

Regarding claim 24, Kitsu as modified in claim 1 discloses a plant system wherein the terrestrial plant (22) comprises plant material wherein at least a portion of the plant (22) material is contacted by the water (1), and at least one plant (22) is grown from the plant material while the platform is afloat in the saline water (1). See figure 1B and 4 and column 4, lines 28-37.

Regarding claim 25, Kitsu as modified in claim 24 discloses a plant system wherein the plant material (22) is a seed. See figure 1B and column 4, lines 28-37.

Regarding claim 26, Kitsu as modified in claim 24 discloses a plant system wherein the plant material (22) is contacted with the saline water (1) by direct contact. See figure 1B and 4.

Claim 29 differs from Kitsu's plant system as modified in claim 1 in calling for a specific type of plant. It would have been an obvious choice to plant a specific type of plant depending on what is aesthetically pleasing to the user.

Regarding claim 30, Kitsu as modified in claim 1 discloses a plant system wherein the plant is a cultivated crop. See column 7, lines 10-14.

Claims 4, 5, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsu (US 4382348) and Hogen (US 4536988) in view of Raskin (US 5876484).

Claim 4 differs from Kitsu's plant system as modified in calling for the water to contain a contaminant. Raskin discloses a plant system wherein the water contains a metal ion. See column 3, lines 66-67 and column 4, lines 1-9. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kitsu's plants system in view of the teachings of Raskin to include a contaminant in the water for the purpose of removing the contaminant to purify the water.

Regarding claim 5, Kitsu as modified by claim 4 discloses a plant system wherein the water is contaminated by lead. See Raskin column 4, lines 1-9.

Claim 15 differs from Kitsu's plant system as modified in claim 4 in calling for an irrigation system. Raskin discloses a plant system comprising an irrigation system. See column 10, lines 55-59. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify Kitsu's plant system in view of the teachings of Raskin to include an irrigation system to supply the system with fresh water.

Regarding claim 16, Kitsu as modified by claim 15 discloses a plant system comprising an irrigation system that delivers fresh water to the plant. See Raskin column 10, lines 55-59.

Regarding claim 17, Kitsu as modified by claim 15 discloses a plant system comprising an irrigation system that delivers a nutrient to the plant. See Raskin column 10, lines 55-59.

Regarding claim 18, Kitsu as modified by claim 15 discloses a plant system comprising an irrigation system that delivers fresh water, which has a lower salinity than saline water to the plant. See Raskin column 10, lines 55-59.

Regarding claim 19, Kitsu as modified by claim 15 discloses a plant system comprising an irrigation system comprising means of storing the irrigation water. See Raskin column 10, lines 52-59.

Claims 7-9, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsu (US 4382348) and Hogen (US 4536988) in view of Shryock (US 2003/0049392).

Claim 7 differs from Kitus's plant system as modified in calling for a growth medium. Shryock discloses a plant system comprising a growth medium. See paragraph 17 and 33. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kitus's plant system in view of the teachings of Shryock to include a growth medium for the purpose of providing nutrients to the plants.

Regarding claim 8, Kitus as modified in claim 7 discloses a plant system wherein the growth medium is at least partially contained in a housing (4, 5, 6). See figure 4.

Regarding claim 9, Kitus as modified in claim 7 discloses a plant system wherein the buoyant portion (5, 6) is the housing. See figure 3 and 4.

Claim 20 differs from Kitus's plant system as modified in calling for at least one growth medium capable of being suspended at the surface of the water. Shryock discloses a plant system comprising a growth medium. See paragraph 17 and 33. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kitus's plant system in view of the teachings of Shryock to include a growth medium on the sheet between the buoyant members for the purpose of providing nutrients to the plants.

Regarding claim 21, Kitus as modified in claim 20 discloses a plant system wherein the growth medium is soil. See Shryock paragraph 17.

Regarding claim 22, Kitus as modified in claim 20 discloses a plant system wherein the growth medium is contained in a housing comprising plastic. See column 3, lines 52-54.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsu (US 4382348) and Hogen (US 4536988) as applied to claim 20 above, and further in view of Kiode (US 5261185).

The claim differs from Kitsu's plant system as modified in claim 20 in calling for an evaporation protective layer at the surface. Kiode discloses a plant system comprising an evaporative protective layer (16). See figure 13 and column 9, lines 47-53. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify Kitsu's plant system in view of the teachings of Kiode to include an evaporative protective layer to protect the plants from the outside elements.

Response to Arguments

Applicant's arguments filed 1/4/2007 have been fully considered but they are not persuasive.

Regarding the argument that Kitsu does not disclose saline water, Kitsu discloses the plant cultivation device is to be used in pond water. As disclosed in the specification by the applicant in paragraph 83 and explained in the rejection above, pond water is a source of saline water.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Holman whose telephone number is 571 272-2754. The examiner can normally be reached on Monday through Friday 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JDH



MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER